

Reconsideration of the application in view of the following remarks is respectfully requested.

REMARKS

1. Status of claims

Claims 99-194 are pending.

2. Claim rejections under 35 U.S.C. §103

Claims 99-194 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ching et al., U.S. Pat. No. 5,859,145 (hereinafter, "Ching") in view of Nordstrom, U.S. Pat. No. 3,536,687 (hereinafter, "Nordstrom"). Applicants respectfully traverse this rejection.

Independent claims 99, 107, 122, 151, 168, and 184 are directed to compositions comprising or methods of preparing terpolymers comprising (a) a cyclohexenyl-containing unit; (b) a vinylic unit comprising a substituent Z defined in the claims; and (c) a unit derived from ethylene. (The term "derived from ethylene" is not meant to be limiting, but merely illustrative, as one of ordinary skill in the art would recognize that the terpolymer recited in the present independent claims could be produced from compounds other than ethylene). These elements are represented in structure II. The unit derived from ethylene was referred to in Applicants' previous paper as an "ethylenic group." It will be referred to herein as an or the "unit derived from ethylene."

Ching teaches polymers comprising an ethylenic backbone (as defined at col. 8, lines 59-67) and comprising pendant cyclic radicals containing allylic hydrogen (col. 10, line 61-col. 11, line 8). However, Ching does not teach, among other elements of the present claims, a polymer

comprising a cyclohexenyl-containing unit. The Examiner recognized this shortcoming of Ching at paper no. 19, the detailed action at p. 3, para. 3.

Nordstrom teaches copolymerization of, for example, cyclohexenylmethyl methacrylate with any " α,β -unsaturated monomer" (col. 2, line 71-col. 3, line 4). One of ordinary skill in the art would recognize that an α,β -unsaturated ~~monomer~~ ^{Nordstrom} comprises at least three atoms other than hydrogen, namely, a β carbon, an α carbon, and an atom other than hydrogen bonded to the α carbon. Ethylene ($\text{CH}_2=\text{CH}_2$) comprises only two non-hydrogen atoms. Therefore, Nordstrom does not teach a terpolymer comprising a unit derived from ethylene.

Handwritten notes:
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HC=CHCl
X
HC=CHCH₃
C-COO

The Examiner alleged that the, e.g., cyclohexenylmethyl methacrylate of Nordstrom could be adapted to the polymers of Ching. However, the teachings of Nordstrom and Ching do not motivate one of ordinary skill in the art to combine the references. Further, and regardless of whether Nordstrom and Ching can properly be combined, the Examiner's allegation represents impermissible hindsight. The present invention points out advantages to the use of pendant groups comprising cyclohexenyl moieties that are neither taught nor suggested by Nordstrom, Ching, or any combination thereof, permissible or not.

First, regarding the motivation to combine Ching and Nordstrom, Nordstrom plainly does not teach terpolymers comprising units derived from ethylene. One of ordinary skill in the art would thus not be motivated to combine the cyclohexene-containing units of Nordstrom with units derived from ethylene as taught by Ching.

Second, the Examiner alleges the combination is valid because Nordstrom teaches that polymers comprising cyclohexene-containing units are reactive in the presence of oxygen and Ching is directed to oxygen-reactive polymers. Therefore, so the Examiner argues, it would be obvious to use Nordstrom's cyclohexene-containing units in the oxygen-reactive polymers of

Ching. However, one of ordinary skill in the art would surmise that there were known in the art, as of the time the present invention was made, a large number of substituted or unsubstituted, cyclic, linear, or branched radicals containing allylic hydrogen (Ching, col. 11, lines 5-8) which were known to be reactive with oxygen. The mere fact that Nordstrom's cyclohexene-containing units were reactive in the presence of oxygen does not guide one of ordinary skill in the art to select Nordstrom's cyclohexene-containing units as opposed to any of the oxygen-reactive species known and encompassed by Ching at col. 11, lines 5-8.

The only motivation to pursue cyclohexene-containing units that is presently of record is found in the present specification, at p. 19, line 24-p. 20, line 3:

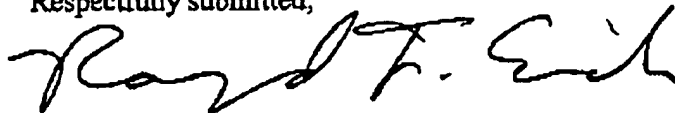
This invention relates to an oxygen scavenging polymer composition comprising cyclic allylic pendant groups which can be used in oxygen scavenging packaging material which have either no or low volatile oxidation by-products. Minimizing volatile by-products reduces the problem of organoleptics in oxygen scavenging food packaging.

Nordstrom does not point out the benefit of cyclic allylic pendant groups in reducing organoleptics in oxygen scavenging packaging materials. Ching also does not point out this benefit of cyclic allylic pendant groups as opposed to linear or branched and substituted or unsubstituted allylic pendant groups. Therefore, there was no motivation to use the cyclohexene-containing units of Nordstrom in the polymers of Ching. The present invention is thus not obvious over these references, and this rejection of claims 99-194 should be withdrawn.

3. Final comments

Applicants maintain all pending claims 99-194 are in condition for allowance. The Examiner is invited to contact the undersigned patent agent at (713) 934-4065 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,



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